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10/772,205

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EXAMINER

GEE, JASON KAI YIN

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/772,205	<b>Applicant(s)</b> BRUMME ET AL.	
	<b>Examiner</b> JASON K. GEE	<b>Art Unit</b> 2434	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-29, 31-38, 41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) 39 and 40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-29, 31-38, 41 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

1. This action is response to communication: amendment received 02/17/2009, with acknowledgement of filing date of 02/03/2004.
2. Claims 1-14, 16-29, 31-38, 41, and 42 are currently pending in this application. Claims 15 and 30 have been cancelled. Claims 29 and 40 are withdrawn. Claim 42 is new.
3. No new IDS was received for this application.

***Response to Arguments***

Applicant's arguments filed 02/17/2009 have been fully considered but they are not persuasive.

The applicants have argued that the AAPA used to teach the limitations of the claims is not admitted prior art, but the applicant's current invention. However, this is not persuasive. The applicants point to paragraph 7 to the language "it would be advantageous" to indicate that the prior art is actually the applicant's invention. However, even if a method is advantageous, it does not necessarily mean it is not prior art. As seen in the beginning of paragraph 7, the paragraph recites "access rights for calls between an assembly and a method in a library's assembly should be defined and limited via rules to prevent code." The paragraph continues to recite examples of when rules should be applied. As seen in paragraph 8, the applicant's invention is distinguished from this prior art as "it would be an advance in the art to provide techniques for a host to prevent a call to a certain method from a certain caller to

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perform a certain function that could destabilize the hosting environment, while allowing the call to the same method from a different and/or more highly trusted caller, where the techniques could use the same method for different types of call prevention and for different types of hosts." As can be seen in the paragraph, the applicants invention is directed to security methods dependent on the user's trust level. The prior art used in paragraphs 2-8 of the AAPA are not directly related to user/role based security and are used to reject the claims where no role based security is utilized. Further, the applicants' claims regarding role/user based security is rejected using the teachings of Muhlestein art as seen below.

### ***Claim Objections***

4. Claims 1-12, 14, 16-20, and 42 are objected to because of the following informalities:

As per claims 1-12, 14, 16-20, and 42, the claims recite method steps which do not tie to a machine nor do the method steps transform the information in any way. A recent Supreme Court decision requires that a method claim must (1) be tied to a particular machine or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. (See *In re Bilski et al*, 88 USPQ 2d 1385)

.Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 5, 6, 9, 10, and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by the Applicant's Admitted Prior Art (hereinafter the AAPA, referring to paragraph numbers from the publication 2005/0172286)

As per claim 1, the AAPA teaches in a host of a virtual machine environment having one or more methods in a shared managed library (paragraph 3, 5, 6), a process for managing calls from a first managed code caller to a first method (paragraph 7), the process managing calls based on a hosting rule selected from a group consisting of: authorizing calls from one or more of a plurality of managed code callers to the first method (paragraph 6 and 7, wherein assemblies may called by other assemblies in a shared managed library; also wherein access rights to calls are defined and limited via rules; having access rights for rules indicate that some calls would be allowed and some would not be allowed); preventing calls from one or more of a plurality of managed code callers to the first method due to the first method's inappropriateness for the virtual machine environment (paragraph 7), and conditionally authorizing calls from one or more of a plurality of managed code callers to the first method (paragraph 7 and 8,

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wherein access rights for calls should be defined and limited via rules, and to selectively disallowing certain classes of resources to hosted code).

As per claim 5, the AAPA teaches wherein when the call from the first managed code caller is allowed, access is provided by the first said method to a protected resource (paragraphs 5 and 6).

As per claim 6, the AAPA teaches wherein any said allowed call provides any said managed code caller with access to one or more protected resources corresponding to the called said method (paragraphs 5 and 6).

As per claim 9, the AAPA teaches configuring each said method in the shared managed library with one said hosting rule (paragraphs 5, 6, and 7).

Asd per claim 10, the AAPA teaches wherein each said method receives the configuring prior to any said call to any said method from any said managed code caller (paragraph 7).

As per claim 42, the AAPA teaches wherein the managing calls comprises either authorizing or prevening a call from a first managed code caller to a first method based at least in part on the first method (paragraphs 7 and 8).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 3, 7, 8, 11-14, 16,17, 19-24, 26-29, 31, 32, 34-38, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admitted Prior Art (hereinafter the AAPA, referring to paragraph numbers from the publication 2005/0172286), in view of Muhlestein et al. US Patent Application Publication No. 2002/0004815 (hereinafter Muhlestein).

As per claim 2, the AAPA teaches wherein the conditional allowance is based upon the method's required level of trust (paragraph 7). However, the AAPA combination does not explicitly teach wherein the conditional allowance is based upon a level of trust attributed to the first managed code caller. However, this is taught by Muhlestein, such as in paragraphs 44 and 45.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the AAPA with the Muhlestein reference. One of ordinary skill in the art would have been motivated to perform such an addition to improve overall system safety and reliability. This is taught by Muhlestein in paragraph 43.

As per claim 3, the AAPA teaches compiling code corresponding to the first managed code caller into native code (paragraph 4); and executing the native code corresponding to the first managed code caller while the first managed code caller is making the call to the first method native code (paragraph 4).

As per claim 7, Muhlestein teaches wherein the level of trust attributed to the first managed code caller corresponds to an identity of a provider of the first managed code caller (paragraphs 44 and 45).

As per claim 8, the AAPA teaches wherein the host compiles the first managed code caller into native code that is executed by a common language runtime (paragraphs 3 and 4). Executing a CLR via the host's operating system is taught throughout Muhlestein, such as in paragraph 6, 30, 31, 34, and 39.

As per claim 11, Muhlestein teaches determining whether the host will use any hosting rule in authorizing a call from any one of the plurality of managed code callers to any of the one or more methods (paragraphs 43-45); and configuring one or more said methods in the shared managed library with one said hosting rule (paragraphs 43-45) when the determination is affirmative, and not configuring the one or more methods in the shared managed library with one hosting rule when the determination is negative.

As per claim 12, the AAPA teaches where each method in the shared managed library provides access to one or more protected resources (paragraphs 3-7), and the host has access to a host configuration data structure comprising: resource checking data for making the determination (paragraphs 2-7); configuration data referencing the one or more protected resources (paragraphs 4-7) and specifying: each protected resource to which will be authorized to any one of the plurality of managed code callers (paragraphs 6-7), each protected resource to which access be prevented to any one of the plurality of managed code callers (paragraphs 6-7), and each protected resource to which access will be authorized to any one of the plurality of managed code callers



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having a recognized level of trust satisfying a security permission demand corresponding to the protected resource (AAPA paragraphs 6-7 and also paragraphs 43-45 of Mulestein teaching levels of trust of managed code callers); wherein the process further comprises: accessing the host configuration data structure; and using the resource checking data in the host configuration data structure to make the determination, wherein the configuring of the one or more methods in the shared managed library with one hosting rule comprises, for each method: matching each protected resource to which the method provides access to the corresponding protected resource in the host configuration data structure, and for each match, assigning to the method the corresponding configuration data that is associated with the protected resource in the host configuration data structure (paragraphs 4-7).

As per claim 13, the Muhlestein references teaches throughout the reference a computer readable medium including machine readable instructions, such as in paragraph 20.

Claim 14, as best understood by the Examiner, is rejected using the same basis of arguments used to reject claims 1, 2, 5, and 6 above. As seen in Muhlestein in paragraphs 44 and 45, calls are intercepted as the code is verified before the code can be granted permissions

As per claim 16, Muhlestein teaches wherein the degree to which the host trusts the managed caller corresponds to an identity of a provider of the managed caller (paragraphs 44-45).

Claim 17 is rejected using the same basis of arguments used to reject claim 8 above.

Claim 19 is rejected using the same basis of arguments used to reject claim 11.

Claim 20, as best understood by the Examiner, is rejected using the same basis of arguments used to reject claim 12 above.

Claim 21 is rejected using the same basis of arguments used to reject claim 13 above.

Independent claim 22 is rejected using the same basis of arguments used to reject claims 1 and 13 above. Further, Muhlstein teaches providing an operating system in a native code portion in paragraph 6. Also, Muhlstein teaches a level of trust attributed to the managed code caller in paragraphs 43-45.

As per claim 23, Muhlstein teaches wherein the level of trust attributed to the managed code caller is based upon an identification of the provider of the managed code caller (paragraphs 43-45).

Claim 24 is rejected using the same basis of arguments used to reject claim 8 above. Further, this is taught by Muhlstein in paragraphs 60 and AAPA paragraphs 4-7.

As per claim 26, the references teach wherein the managed code portion further comprises one or more files associated with user code that, when compiled into an intermediate language code and metadata generated by a language compiler, are represented by one or more of said managed code callers (paragraphs 3-6 of AAPA and also paragraphs 5 and 60 of Muhlstein).

As per claim 27, the AAPA teaches wherein the execution engine means in the native code portion further comprises a compiler to compile each said managed code caller into native code for execution by the native code portion (paragraphs 3–5).

As per claim 28, the AAPA teaches a JIT compiler to compile each said managed code caller into native code; and a CLR loader to load the compiled native code for execution by the native code portion (paragraphs 3 and 4).

Independent claim 29 is rejected using the same basis of arguments used to reject claims 1, 14, and 22 above.

Claim 31 is rejected using the same basis of arguments used to reject claim 7 above.

Claim 32 is rejected using the same basis of arguments used to reject claim 8 above.

Claim 34 is rejected using the same basis of arguments used to reject claim 11 above.

Claim 35 is rejected using the same basis of arguments used to reject claim 12 above.

Claim 36 is rejected using the same basis of arguments used to reject claim 26 above.

As per claim 37, the references teaches wherein the intermediate language code and metadata generated by the language compiler from one or more files each having a file type and being associated with user code (paragraphs 3-6 of AAPA and also paragraphs 5 and 60 of Muhlstein).

Claim 38 is rejected using the same basis of arguments used to reject claim 28 above.

Claim 41 is rejected using the same basis of arguments used to reject claims 1, 14, 22, and 29 above.

9. Claims 4, 18, 25, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA and Muhlestein reference as applied above, and further in view of Muhlesten US Patent Application Publication 2002/0108102 (hereinafter Muhl '102).

As per claim 4, as best understood by the Examiner, the AAPA and the Muhlestein reference do not explicitly teach throwing an exception during the execution when the call from the first managed code caller to the first said method native is made and: the call that is never allowed; the level of trust attributed to the first managed code caller is insufficient when compared to a security permission demand assigned to and required by the first said method. However, this is taught by Muhl '102, such as in paragraphs 15, 19, 43, 62, 64, 65, 76, and 86.

At the time of the invention, it would have been obvious to combine the Muhl '102 reference with the AAPA combination. One of ordinary skill in the art would have been motivated to perform such an addition to provide applications executing within a managed code environment easy access to instrumentation data that resides outside the managed code runtime (paragraph 11).

Claim 18 is rejected using the same basis of arguments used to reject claim 4 above.

Claim 25 is rejected using the same basis of arguments used to reject claims 4 and 18 above.

Claim 33 is rejected using the same basis of arguments used to reject claim 4 above.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. GEE whose telephone number is (571)272-6431. The examiner can normally be reached on M-F, 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-38113811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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03/19/2009

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